**BCH 302 practical**

**Lab Sheet #6**

**Lipids-I**

**1- Solubility test:**

**Method**:

**Becarful when adding different solvents!!!**

- Place 0.5ml of oil in 6 test tubes clean, dry containing 4ml of different solvents.

- Shake the tubes thoroughly, then leave the solution for about one minute.

|  |  |
| --- | --- |
| Tube | Result |
| acetone |  |
| chloroform |  |
| ether |  |
| ethanol |  |
| diluted acid |  |
| dilute alkaline |  |

**Explain the results that you got?**

**……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**Did olive oil dissolve in Ethanol? Why?**

**…………………………………………………………………………………………………………………………………………………………………………**

**2- Saponification test:**

**Method**:

1-Place 2 ml of oil in a large test tube (or flask).

2-Add 4 ml of alcoholic potassium hydroxide (preferably add little small pieces of porcelain to regulate the boiling point).

3-Boil the solution for 3 minutes. After this period, make sure it is perfectly saponification process, by taking a drop of the solution and mix with the water if oil separated indicates that the non-completion of the saponification. In this case, continued to boil until all the alcohol evaporates.

4-Take the remaining solid material (soap) and add about **30 ml of water** and keep it for the following tests.

5- Shake the solution after it cools and noted to be thick foam.

**Result:**.................................................................................................................................................................

**Write the formula of saponification process.**

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**3-The effect of salt (NaCl) on soap solution :**

1-Place about 10 ml of soap in the beaker

2-Add small amounts of sodium chloride in batches, stirring until saturated solution

**Result:**.................................................................................................................................................................

**4-Formation insoluble fatty acids salt (insoluble soaps):**

**Method:**

1-Add about 4 ml of distilled water to 2 ml of soap in three test tubes

2-Add to the first tube a few drops of calcium chloride, to second tube MgCl ,and third tube lead acetate.

|  |  |
| --- | --- |
| Result | Tube |
|  | Calcium Chloride + Soap solution |
|  | Magnesium Chloride + Soap solution |

**How you will explain your results?**

**……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….**